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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,528	04/20/2004	Dibyapran Sanyal	200400478-2	2967

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EXAMINER

NGUYEN, PHILLIP H

ART UNIT	PAPER NUMBER
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2191

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/827,528

Applicant(s)

SANYAL ET AL.

Examiner

Phillip H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20050510</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the original filing date of April 20, 2004. Claims 1-23 are pending and have been considered below.

Note

2. Regarding claims 1-5, 10, 11-15, 20, and 21, recite the phrase "for" in the body and preamble of the claims. It indicates intended use and as such does not carry patentable weight. Limitations following the phrase "for" describe only intended use but not necessarily required functionality of the claims. The word could be changed to recite "to" instead. For example, claim 1 recites, "for extracting" should be changed to "to extract". In order to these limitations to be considered, applicant is required to amend the claims so that the claim limitations are recited in a definite form.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 11-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 11, recites a apparatus but it appears reasonable to interpret this apparatus by one of ordinary skill in the art as software, per se. Applicant's specification provides no explicit and deliberate definition of the components ("source model", "target model", "mapping", "routine generator") that make up the system other

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than they could be software components, which are directed to functional descriptive material, per se, and are therefore non-statutory. Additionally, the claim recites the word "for" in the body of the claim. It indicates intended use and as such does not carry any patentable weight. The limitations following the word "for" describe only intended use but not necessarily required functionality of the claim. Limitations following the phrase "for" do not carry patentable weight, which cause the claim appears as a series of non-functional descriptive material/data without any functional relation with each other. For instance "for generating" should be changed to "to generate" or "generates". Claims 12-20 directly or indirectly depend on claim 11 and therefore have been addressed in connection with the rejection set forth to claim 11 above.

Regarding claims 21, recites a computer program, which is directed to software per se, lacking of storage on a medium, which enables any underlying functionality to occur. Additionally, the claim recites the phrase "for", which indicates intended use and as such does not carry patentable weight. The limitations following the word "for" describe only intended use but not necessarily required functionality of the claim. Limitations following the phrase "for" do not carry patentable weight, which cause the claim appears as a series of non-functional descriptive material/data without any functional relation with each other. For instance "for transforming" should be changed to "to transform" or "generates". Claims 22 and 23 are directly depend on claim 21 and therefore have been addressed in connection with the rejection set forth to claim 21 above.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 7 recites the limitation "said model". There is insufficient antecedent basis for this limitation in the claim. It is unclear to Examiner whether Applicant is referred to "source model" or "target model".

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-9, 11-19, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al. (United States Patent Application Publication No.: US 2003/0014550 A1), in view Larson (United States Patent No.: 4,729,096).

As per claim 1:

Fischer discloses a method for creating data transformation routines for binary data for transforming said data from a source format to a target format, the method comprising the step of:

- generating a source model of a source format element ("**a first data structure is declared that a compiler, for example a C compiler, interprets as packed**" [0027]);
- generating a target model of a target format element ("**a second data structure is declared that the compiler interprets as unpacked**" [0027]);
- generating a mapping between said source model and said target model ("**the data is copied from the original packed data structure to the second, unpacked data structure using the pointer receiving the cast at 715. The pointer receiving the cast at 715 causes the compiler to treat data read from the original packed data structure at 720 as packed data so that is may be correctly copied to the second, unpacked data structure**" [0027], the mapping must be existed in order to the processor to correctly copied to the second data structure).

Fischer does not explicitly disclose:

- generating a transformation routine based on said mapping for extracting data from said source element and depositing said data in said target element.

Larson discloses an analogous method for generating a translator program.

- generating a transformation routine based on said mapping ("**The code generator 10a1B generates a translator program that will process the user's source code**" col. 7, line 36-37) for extracting data from said source element and depositing said data in said target element.

However, it would have obvious to one having an ordinary skill in the art at the time the invention was made to modify Fischer's approach to generate a routine. One of ordinary skill in the art would have been motivated to modify to ("**develop the translator program for utilizing the it to create object code from a user's source code**" col. 3, line 35-37)

As per claim 2:

Fischer and Larson disclose the method as in claim 1 above; and Fischer further discloses:

- target models are generated for a plurality of target elements and a mapping generated between the source model and said plurality of target models (a **data structure contains many models and each model contains multiple elements**).

As per claim 3:

Fischer and Larson disclose the method as in claim 1 above; and Fischer further discloses:

- source models are generated for a plurality of source elements and a mapping generated between said plurality of source models and said target model (a **data structure contains many models and each model contains multiple elements**).

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As per claim 4:

Fischer and Larson disclose the method as in claim 1 above; and Larson further discloses:

- transformation routine is arranged for transforming data in software code instructions from a source format code to a target format code and said routines are generated in said target format code ("**develops a translator program capable of transforming a user's source code into object code**" see abstract).

As per claim 5:

Fischer and Larson disclose the method as in claim 1 above; and Fischer further discloses:

- the mapping accounts for differences in endianness between the source and target models ("**convert them from little-endian format to big-endian format. That is, it reverses the order of the bytes in data structure**" [0024]).

As per claim 6:

Fischer and Larson disclose the method as in claim 4 above; and Larson further discloses:

- the transformation routine is executed at the runtime of a program in said source code (**the translator program is executed at the runtime of a**

program in the source code in order to transform the source code into object code).

As per claim 7:

Fischer and Larson disclose the method as in claim 1 above; and Fischer further discloses:

- said models relate bit positions to variable names for any given instruction (**"the structure "mystruct" maps well to a packed data structure comprising 16-bit integer "a" followed by a 32-bit integer "b" [0029].**)

As per claim 8:

Fischer and Larson disclose the method as in claim 1 above; and Fischer further discloses:

- a group of source models and target models are provided wherein one or more models are applicable to a plurality of respective source or target instructions (**a data structure contains many models and each model contains multiple elements. Therefore, one or more of models are applicable to either source or target instruction).**

As per claim 9:

Fischer and Larson disclose the method as in claim 4 above; and Fischer further discloses:

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- said transformation routine is associated with a template providing a set of target format instructions semantically equivalent to said identified source instruction (**first data structure (packed data structure) and second data structure (unpacked data structure) are equivalent in order to correctly transform from packed to unpacked data structure**).

As per claims 11-19:

- apparatus claims, recite the same limitations as recited in claim 1-9, respectively, and therefore, have been addressed in connection with the rejection set forth to claims 1-9, respectively.

As per claim 21:

- a computer program claim, recites the same limitations as recited in claim 1, and therefore, has been addressed in connection with the rejection set forth to claim 1 above.

As per claim 22:

Fischer and Larson disclose the computer program as in claim 21 above; and Larson further discloses:

- said transformation routines are implemented as routines in said computer program (**"a translator program capable of transforming a user's source**

code into object code" see the abstract; this means, the translator program is implemented as routines in computer program).

As per claim 23:

- a computer program claim, recites the same limitation as recited in claim 6, and therefore, has been addressed in connection with the rejection set forth to claim 6.

9. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al (United States Patent Application Publication No.: US 2003/0014550 A1) and Larson (United States Patent No.: 4,729,096), in view of MacLeod et al. (United States Patent No.: US 6,356,901 B1).

As per claim 10:

Fischer and Larson disclose the method as in claim 1 above, but does not explicitly disclose:

- the transformation routine is arranged for transforming data from a database between a source database format to a target database format.

However, MacLeod discloses an analogous method for transforming data between databases:

- the transformation routine is arranged for transforming data from a database between a source database format to a target database format ("the

transformation of data as it moves from source database to a destination database” col. 3, line 51-52).

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify Fischer and Larson’s approaches to also perform transformation of data between databases. One of ordinary skill in the art would have been motivated to modify because it safe time and money when updating a newer version of database without re-creating a new database.

As per claim 20:

- recites the same limitation as recited in claim 10, and therefore, has been addressed in connection with the rejection set forth to claim 10 above.

Conclusion

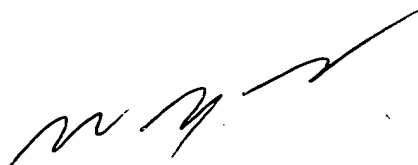
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip H. Nguyen whose telephone number is (571) 270-1070. The examiner can normally be reached on Monday - Thursday 10:00 AM - 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PN
03/1/2007



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